



United States
Environmental Protection Agency

Air and Radiation
Stratospheric Protection Division
6205J

Substitute Adhesives, Coatings and Inks Under SNAP as of June 8, 1999

SNAP Information: <http://www.epa.gov/ozone/title6/snap/snap.html>
Stratospheric Ozone Protection Hotline: (800) 296-1996

EPA has created the Significant New Alternatives Policy (SNAP) Program under section 612 of the Clean Air Act Amendments. SNAP evaluates alternatives to ozone-depleting substances. Substitutes are reviewed on the basis of ozone depletion potential, global warming potential, toxicity, flammability, and exposure potential as described in the March 18, 1994 final SNAP rule (59 FR 13044). Lists of acceptable and unacceptable substitutes will be updated periodically in the Federal Register. The following SNAP notices and subsequent final rules are included in this list: August 26, 1994 (59 FR 44240), January 13, 1995 (60 FR 3318), June 13, 1995 (60 FR 31092), July 28, 1995 (60 FR 38729), February 8, 1996 (61 FR 4736), May 22, 1996 (61 FR 25585), September 5, 1996 (61 FR 47012), October 16, 1996 (61 FR 54030), March 10, 1997 (62 FR 10700), June 3, 1997 (62 FR 30275), February 24, 1998 (63 FR 9151), May 22, 1998 (63 FR 28251), January 26, 1999 (64 FR 3861), April 28, 1999 (64 FR 22981), and June 8, 1999 (64 FR 30410).

Acceptable Substitutes for Adhesives, Coatings and Inks under the Significant New Alternatives Policy (SNAP) Program as of June 8, 1999

Substitute	ODS Being Replaced	Comments
Petroleum Hydrocarbons	Methyl Chloroform	OSHA standards exist for many of these chemicals. Formulators should use chemicals with lowest toxicity, where possible.
Oxygenated solvents (Alcohols, Ketones, Ethers, and Esters)	Methyl Chloroform	OSHA standards exist for many of these chemicals. Formulators should use chemicals with lowest toxicity, where possible.
Chlorinated solvents (methylene chloride, trichloroethylene, perchloroethylene)	Methyl Chloroform	High inherent toxicity. Use only when necessary. OSHA and RCRA standards must be met.
Terpenes	Methyl Chloroform	
Water-based formulations	Methyl Chloroform	
High-solid formulations	Methyl Chloroform	
Alternative technologies (e.g., powder, hot melt, thermoplastic plasma spray, radiation-cured, moisture-cured, chemical-cured, and reactive liquid)	Methyl Chloroform	

**Acceptable Substitutes Subject to Use Conditions for Adhesives, Coatings and Inks under the
Significant New Alternatives Policy (SNAP) Program as of June 8, 1999**

Substitute	ODS Being Replaced	Conditions
Monochlorotoluene/benzotrifluorides	Methyl Chloroform	The workplace standard for monochlorotoluenes is based on an OSHA PEL of 50 ppm for orthochlorotoluene. The workplace standard for benzotrifluoride is 100 ppm, based on the company-set acceptable exposure limit.
Trans-1,2-dichloroethylene	CFC-113, MCF	The OSHA set exposure limit (PEL) is 200 ppm.

**Unacceptable Substitutes for Adhesives, Coatings and Inks under the
Significant New Alternatives Policy (SNAP) Program as of June 8, 1999**

Substitute	ODS Being Replaced	Reason
Chlorobromomethane	CFC-113, MCF, HCFC-141b	Other alternatives exist with zero or much lower ODP.